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10/594,906	06/18/2007	Motooki Sugihara	46970-5278	8310
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DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209				DAZENSKI, MARC A
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)
	10/594,906	SUGIHARA ET AL.
	Examiner	Art Unit
	MARC DAZENSKI	2481

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 September 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,4,5,8 and 9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,2,4,5,8 and 9 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 29 September 2006 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9-29-06</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Objections

Claim 2 is objected to because of the following informalities: the claim as written does not make grammatical sense and it is therefore unclear as to what action the means undergoes (i.e., "responding to viewing, storage and deletion" or "updated to change a preference point."). For the purposes of prior art, the examiner interprets the claim to mean "wherein the knowledge-database updating means responds to viewing, storage and deletion of recorded information corresponding to a keyword to be updated by changing a preference point related to the keyword." Appropriate correction is required.

Claims - 35 USC § 112

Regarding **claims 1-2 and 4-5**, Applicant appears to be invoking 112 6th paragraph as the respective limitations of said claim(s) meet the 3-prong analysis disclosed under section 2181 of the MPEP; the examiner assumes the following claimed "means for" correspond to the listed elements in the specification:

the disclosed "acquiring means" corresponds to "broadcast receiver 6" (see page 15 as well as item 6 in figure 2);

the disclosed "viewing means" corresponds to "MPEG decoder" (see page 16, wherein it is disclosed that "an MPEG decoder that decodes (reproduces) the encoded broadcast program data...not illustrated because they are well known");

the disclosed “preference-degree setting means” corresponds to “program managing unit 8” (see page 15 and item 8 in figure 2);

the disclosed “encoding-form setting means” corresponds to “program managing unit 8” (see page 15 and item 8 in figure 2);

the disclosed “reencoding means” corresponds to “reencoding unit 9” (see page 15 and item 9 in figure 2);

the disclosed “accumulating means” corresponds to “accumulation unit 7” (see page 15 where it is disclosed that this unit is a HDD, as well as item 7 in figure 2);

the disclosed “deleting means” corresponds to “reencoding unit 9” (see page 18 wherein it is disclosed “...controls the reencoding unit 9 to delete the recorded broadcast program determined to be deleted...”);

the disclosed “knowledge-database updating means” corresponds to “program managing unit 8” (see page 23);

the disclosed “recording means” corresponds to “disc drive 10” (see page 15 and item 10 in figure 2);

the disclosed “reproduction-state recording means” corresponds to “accumulation unit 7” (see page 15 where it is disclosed that this unit is a HDD, as well as item 7 in figure 2); and,

the disclosed “setting means” corresponds to “program managing unit 8” (see page 15: “The program managing unit 8...serves as a preference-degree setting unit...”; see item 8 in figure 2).

Claim Rejections - 35 USC § 112

Claims 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 discloses “An information recording program” as well as various limitations, the language of which appear to invoke 112 6th paragraph (see, e.g., “acquiring means for acquiring,” “viewing means for viewing,” “preference-degree setting means for setting a preference degree,” etc.). However, as written the claim is indefinite since it is unclear whether Applicant intends to claim a program or an apparatus/system. Though the preamble is drawn towards a program, the body of the claim appears to disclose the structure of an apparatus. The claim cannot simultaneously be drawn toward both a program and an apparatus, and thus for the purposes of prior art, the examiner interprets claim 8 to be drawn towards a program.

Claim 9 depends from claim 8 and is therefore rejected in view of the explanation set forth in claim 8 above, since it fails to cure the deficiencies of said claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 8-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Note:

A "signal" (or equivalent) embodying functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al (US PgPub 20030093790), hereinafter referred to as Logan, in view of Imada et al (US Patent 7,254,318), hereinafter referred to as Imada, in view of Dudkiewicz et al (US Patent 7,434,247), hereinafter referred to as Dudkiewicz.

Regarding **claim 1**, Logan discloses an information recorder (see figure 1 particularly User Location 141 as well as [0053]: “The broadcast programming content received at the user location at 141 may be immediately processed or stored for later processing or viewing) comprising:

an acquiring means for acquiring, from the outside, a recorded information to be reproduced (see figure 1 particularly Broadcast Programming Source 100 and User Location 141 as well as paragraphs [0062] – [0063]: “It is important to observe that the ‘broadcast programming’ from the source 100 is available for processing at both a remote station and at the user’s location as illustrated in Fig. 1...the principles of the invention are...equally applicable to...programming that is published via the Internet, and to programming such as movies which are transported to the user on published data storage media, such as DVD disks.”);

a viewing means for viewing the acquired recorded information (see [0056]: “The resulting program content which is in condition for playback may be immediately

presented to the user, or it may be stored at 163 for selective playback at a more convenient time as indicated at 171 and 190.”; see [0260]: “The user may select items from this EPG display to record or play incoming broadcasts (or both), may play previously recorded programming...”);

a knowledge database for extracting keywords related to the viewed recorded information to accumulate and store the keywords (see [0200] & [0203]: “...the slug might just be a list of key words...Preference setting by each viewer would customize the presentation in a number of ways. The user could input levels of “hardness,” the density of bookmarks, and the maximum or minimum length of segments desired...The viewer could also input keywords that would signify extra interest.”);

a preference-degree setting means for setting a preference degree of a user for the recorded information per recorded information by comparing the keywords stored in the knowledge database with a keyword related to the recorded information to be reproduced (see [0204] – [0205]: “Alternatively, the system could deduce these parameters (desired density, for instance) or keywords on a viewer-by-viewer basis. If a user continually skipped out of a segment shortly after landing each time, the system might deduce that the user was not that interested in the content and therefore reduce the density of presented bookmarks. If the system deduced a keyword for a user, it could then find the closest bookmark with which to demarcate it. For instance, if a keyword is found, the system might lower its threshold of tolerance for creating a bookmark this allowing one to appear shortly before the word.”);

an encoding-form setting means for responding to the set preference degree to set a reencoding form or deletion form for the acquired recorded information per recorded information (see [0117]: "The user's specification or preferences as stored at 117 are then used at 115 to select only that metadata which best fits the user's needs for transmission to the user's metadata storage at 133."); see [0118]: "The user's preferences may be derived from his or her activity. For example, the particular programs a user chooses to save or view may be monitored to determine the user apparent content preferences...Alternatively, 'user log' data recording the user's activity may be transmitted to the remote location where it is analyzed to produce preference data."); see [0121]: "a.) Preference data may be used at 151 to select or discard particular received broadcast segments so that only those which are more likely to be of interest to the user are saved, thus conserving storage space."); see [0126]: "f.) Preference data for individual users or combined preference data from many users may be used...to determine which programming content and descriptive metadata should be stored, and when previously stored content and metadata should be discarded...")...and...

a deleting means for deleting the corresponding recorded information accumulated in the accumulating means by using the set deletion form (see [0121]: "a.) Preference data may be used at 151 to select or discard particular received broadcast segments so that only those which are more likely to be of interest to the user are saved, thus conserving storage space.").

However, Logan fails to disclose a reencoding means for reencoding the corresponding acquired recorded information by using the set reencoding form to generate reencoded recorded information; an accumulating means for accumulating the generated reencoded recorded information. The examiner maintains it was well known to include these missing limitations, as taught by Imada.

In a similar field of endeavor, Imada discloses a reencoding means for reencoding the corresponding acquired recorded information by using the set reencoding form to generate reencoded recorded information; an accumulating means for accumulating the generated reencoded recorded information (see column 10, lines 30-49: "An embodiment 2 regards to selection of contents to be re-encoded...performs scheduling so that the order of contents to be backed up is determined in a manner of minimizing the time taken for re-encoding. The order is determined based on priorities assigned to each content, namely first priority, second priority, and third priority..."; see figure 3 particularly step S15 which discloses a re-encoding operation; see column 10, lines 64-67: "With these events, contents to be copied are selected. Each content to be copied is a content that the user desires to record in a DVD without degrading image quality at an early stage of the overall processing.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Logan to include the teachings of Imada, for the purpose of making more efficient use of a recording medium.

However, the combination of Logan and Imada fails to disclose the remaining limitations of the claim. The examiner maintains that it was well known to include the missing limitations, as taught by Dudkiewicz.

In a similar field of endeavor, Dudkiewicz discloses a knowledge-database updating means for updating preference points assigned to the keywords stored in the knowledge database (see column 11, lines 3-9: “A Category_List field provides goodness of fit scores for the programming event with respect to categories in a classification hierarchy...A Keyword_List field contains keywords describing the subject matter of the programming event and may further contain goodness of fit scores for each keyword.”; see column 13, lines 17-25: “The candidate keywords are provided (222) as input to a classification tool configured to generate goodness of fit scores for categories of a classification hierarchy. Keywords are then selected (224) from among the candidate keywords based on the category goodness of fit scores generated for each of the candidate keywords by the classification tool. The selected keywords are then stored (226) as a component of metadata for the programming event.”; column 13, lines 62-64: “...the system use is preferably enabled to...add or change a category goodness of fit score.”; column 16, lines 31-38: “In addition, the viewer may enter score for each category in the classification hierarchy, may associate keywords with categories of the classification hierarchy as qualified keywords, and may associate preference scores with keywords and qualified keywords. The user interface preferably allows the user to navigate through the classification hierarchy structure and to enter scores for categories as desired.”),

wherein the preference-degree setting means determines degree of matching between the keywords stored in the knowledge database and the keyword related to the recorded information to be reproduced to extract a matched keyword, thus setting the preference degree by adding or subtracting a preference point set to the extracted keyword (see column 11, line 66 through column 12, line 6: "...PDD and production data for a programming event may be searched with respect to each category of the hierarchy to generate a list of matched categories with associated confidence scores in a range from 1% to 100%. The confidence score for each matched category is used as that category's goodness of fit score, and categories having no match are treated as having goodness of fit scores of zero."); column 12, lines 36-41: "Once determined, the identifiers and associated goodness of fit scores of the representative categories are stored in delimited fashion (56). Other data is also generated through processing of the PDD and production data and is stored together with the goodness of fit scores in delimited fashion to comprise metadata for the programming event."); column 12, lines 55-63: "...all text data associated with the programming event such as script data and PDD data is processed to identify all verbs and all nouns and associated adjectives contained therein. These candidate keywords are then provided as input to the categorization tool, which produces a goodness of fit score for each category of the classification hierarchy based on each input candidate keyword. Keywords are then chosen from among the candidate keywords based on the highest goodness of fit score.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Logan and Imada to include the teachings of Dudkiewicz, for the purpose of enabling intelligent identification of programming events to automatically record programming events of interest (see Dudkiewicz, column 3, lines 54-67).

Regarding **claim 2**, the combination of Logan, Imada and Dudkiewicz discloses everything claimed as applied above (see claim 1). Further, Logan discloses wherein the knowledge-database updating means for responding to viewing, storage and deletion of recorded information corresponding to a keyword to be updated to change a preference point related to the keyword (see [0096]: "...the preferences of the user as stored in 117 may be expressly stated by the user or derived from the user's viewing history."); see [0118]: "...the particular programs a user chooses to save or view may be monitored to determine the user apparent content preferences."; see [0139]: "...the locally created metadata may be the result of interactive choices made by the viewer...may indicate whether or not given program segments had been (a) selected for storage...(b) selected for actual viewing, (c) viewing for a specified period before being terminated...").

Regarding **claim 4**, the combination of Logan, Imada and Dudkiewicz discloses everything claimed as applied above (see claim 1). Further, Dudkiewicz discloses wherein the preference-degree setting means further comprising: a selecting means used by the user to select a preference degree from a plurality of preference degrees for the recorded information (see column 16, lines 31-38: "In addition, the viewer may

enter score for each category in the classification hierarchy, may associate keywords with categories of the classification hierarchy as qualified keywords, and may associate preference scores with keywords and qualified keywords. The user interface preferably allows the user to navigate through the classification hierarchy structure and to enter scores for categories as desired."); and

a recording means for recording the selected preference degree per recorded information (see column 13, lines 17-25: "The candidate keywords are provided (222) as input to a classification tool configured to generate goodness of fit scores for categories of a classification hierarchy. Keywords are then selected (224) from among the candidate keywords based on the category goodness of fit scores generated for each of the candidate keywords by the classification tool. The selected keywords are then stored (226) as a component of metadata for the programming event.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Logan and Imada to include the teachings of Dudkiewicz, for the purpose of enabling intelligent identification of programming events to automatically record programming events of interest (see Dudkiewicz, column 3, lines 54-67).

Regarding **claim 5**, the combination of Logan, Imada and Dudkiewicz discloses everything claimed as applied above (see claim 1). Further, Logan discloses wherein the preference-degree setting means includes: a reproduction-state recording means for accumulating and recording a previous reproduction state of the user of each of the recorded information; and a setting means for setting the preference degree per

recorded information based on the accumulated and recorded reproduction state (see [0096]: "...the preferences of the user as stored in 117 may be expressly stated by the user or derived from the user's viewing history."; see [0118]: "...the particular programs a user chooses to save or view may be monitored to determine the user apparent content preferences."; see [0139]: "...the locally created metadata may be the result of interactive choices made by the viewer...may indicate whether or not given program segments had been (a) selected for storage...(b) selected for actual viewing, (c) viewing for a specified period before being terminated...").

Regarding **claims 8-9**, the examiner maintains that the claims are the corresponding program to the apparatus of claims 1-2, respectively, and are therefore rejected in view of the explanation set forth in claims 1-2 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571) 270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter-Anthony Pappas can be reached on (571) 272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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